

CENTRAL OBSTETRICS INFORMATION MANAGEMENT SYSTEM – UPGRADING AND IMPROVING PATIENT’S SAFETY

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INTRODUCTION

KKH Delivery Suite forms an important part of the hospital's maternity services, accommodating approximately 11,000-13,000 births a year. Continual maternal care, needs to be tracked across multiple pregnancies to provide comprehensive obstetric care to the child bearing mother.

The previous obstetrics information management system (Philips OBTraceVue) was set up at KKH Delivery Suite in Y2004. Its main function was for fetal surveillance, Delivery Suite's bed management and archiving functionality . All the fetal monitors in the 28 delivery rooms and the 7 observational beds were connected to this central system which were available in triage and two other stations.

This system was running on a absolute Windows 2000 platform – needed to be replaced urgently to manage critical patient information efficiently to improve patient safety and quality of care for our patients in Delivery Suite.

Riding on this upgrading opportunity, our team decided to leverage on the system capability to extend viewing station to all individual delivery rooms.

AIM

Our main aim is to improve patient care & safety and to heighten our risk management of obstetric care in KKH.

Upgrading of the system will have the following enhancement:

- ❖ Automated surveillance and alerting capabilities
- ❖ Individual clients in every delivery room enabling staff to focus on total patient care
- ❖ Electronic documentation for better communication of patient care
- ❖ Accessibility of the system through intraweb allowing timely response to critical events by the medical team



METHODOLOGY

In year 2010, site visits and benchmarking of international centres using the OBTraceVue system were done by our nursing and medical team during their:

- ❖ Overseas attachments to Duke University in Durham
- ❖ Conferences in Strasbourg, France

Sourcing for vendors, with solutions to fit into KKH practices and patient care delivery system was carried out.

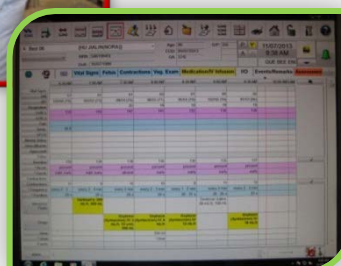
A comprehensive evaluation of the system was done by a multi-disciplinary team comprising of nurses, doctors, Informatics Support Department (ISD) and administrative leaders, to finalise a chosen system provider to allow us to achieve our aims. The following criteria was used:

Table showing criteria & weightage	
Functional Requirements	35%
Impact on Project KPI	10%
Technical Assessment (Security & System)	15%
Vendor's Product Demo and Present	10%
Support Requirements	15%
Vendor Professional Services Assessment	15%

Redesigning space for a much larger capacity server storage for safe-guarding of patients' confidential information.

Our doctors and direct care nurses came together to give their views on re-formatting forms, documents and alert values which fit into our guidelines and practices.

Training of super users and all system users were carried out to equip staff to be familiar with the system set-up.



RESULTS

On March 19th 2012, the system went live. There were an increased from 5 to 38 review stations, including individual clients in each patient's room.

Automated flags, reminders and checklists were available to facilitate greater compliance with professional care standards and patient safety.

Web-based accessibility through the hospital network supported the complex, multi-tasking workflow of clinicians on the move.

The overview capability enabled staff a "glance status" of all or selected patients on the network whilst conducting delivery in another room; as our staff ratio is 1:2 in KKH Delivery Suite.

Review of fetal heart tracing during case discussions and teaching sessions was made available in our meeting room through KKH Intraweb.

HL7 capabilities enabled integration with hospital systems - Admission, Discharge & Transfer (ADT) interface from SAP/OAS. With Electronic Medical Record (EMR) interfaces, this system helped in eliminating duplicate entries and allowed for improved patient safety and clinical efficiency.

CONCLUSION

With the advancement of EMR technology in the whole healthcare system, enhancement and expansion of this obstetrics information management system has helped to manage critical patients' information more efficiently. Having individual client in each patient's room also enabled us to improve patient's monitoring and ensure patient's safety and quality of obstetrics care in KKH, Delivery Suite.

FUTURE PLAN

There is capacity for this system to be expanded to link up with the four obstetric antenatal wards and our neonatal units to allow a whole consortium of care for our mothers and babies. Electronic charting and clinical notes functionalities and capabilities to be are integrated within EMR will be explored in FY 2014 and beyond.